

REMARKS

Claims 17-31, 33-41 and 43-59 remain in the application for consideration. In view of the following remarks, Applicant respectfully requests that the rejections be withdrawn and the application be forwarded on to issuance.

§ 103 Rejections

Claims 17-19, 29, 33, 34, and 41 stand rejected under 35 U.S.C. §103(a) as being obvious over Merriam, U.S. Patent No. 6,401,051 (hereinafter Merriam) in view of U.S. Patent No. 5,539, 992 to Wang.

Claims 17, 20-28, 30, 31, 34-41, and 43-59 stand rejected under 35 U.S.C. §103(a) as being obvious over Fitch et al., U.S. Patent Number 6,321,092 (hereinafter Fitch) in view of Wang.

Before undertaking a discussion of the substance of the Office's rejections, the following discussion of the §103 Standard is provided.

The §103 Standard

In making out a §103 rejection, the Federal Circuit has stated that when one or more reference or source of prior art is required in establishing obviousness, "it is necessary to ascertain whether the prior art *teachings* would appear to be sufficient to one of ordinary skill in the art to suggest making the claimed substitutions or other modification." *In re Fine*, 5 USPQ 2d, 1596, 1598 (Fed. Cir. 1988). That is, to make out a prima facie case of obviousness, the references must be examined to ascertain whether the combined *teachings* render the claimed subject matter obvious. *In re Wood*, 202 USPQ 171, 174 (C.C.P.A. 1979).

1 Moreover, there is a requirement that there must be some reason,
2 suggestion, or motivation *from the prior art*, as a whole, for the person of ordinary
3 skill to have combined or modified the references. *See, In re Geiger*, 2 USPQ 2d
4 1276, 1278 (Fed. Cir. 1987). It is impermissible to use the claimed invention as an
5 instruction manual or "template" to piece together the teachings of the prior art so
6 that the claimed invention is rendered obvious. One cannot use hindsight
7 reconstruction to pick and choose among isolated disclosures in the prior art to
8 deprecate the claimed invention. *In re Fritch*, 23 USPQ 2d 1780, 1784 (Fed. Cir.
9 1992).

10 A factor cutting against a finding of motivation to combine or modify the
11 prior art is when the prior art *teaches away* from the claimed combination. A
12 reference is said to teach away when a person of ordinary skill, upon reading the
13 reference, would be led in a direction divergent from the path that the applicant
14 took. *In re Gurley*, 31 USPQ 2d 1130, 1131 (Fed. Cir. 1994).

15 In order for a prima facie case of obviousness to be made, the resulting
16 combination or motivation must appear to show or suggest the claimed invention.
17 *In re Nielson*, 2 USPQ 2d 1525, 1528 (Fed. Cir. 1987).

18 In addition to the standard discussed above, the Office has provided a
19 paper, available at the following link:

20
21 <http://www.uspto.gov/web/menu/busmethp/busmeth103rel.htm>

22
23 that describes proper and improper rejections made under §103(a).
24 Particularly instructive is Example 17 that appears in Section V of the paper
25 illustrating an improper §103(a) rejection which is based upon a proposed

1 motivation that is simply too general and lacking in particularity. This example is
 2 reproduced below in its entirety for the Office's convenience:

3 **V. Examples of Improper Rejection under 35 U.S.C. 103**

4 **Example 17: Improper rejection based upon hindsight - general**
 5 **motivation statement.**

6 **a. The claimed invention**

7
 8 The invention is drawn to a smart card containing a tracking
 9 mechanism, which tracks shopping preferences of consumers by recording
 10 the type, quantity, and dates of purchase for a pre-selected group of
 11 products. The smart card is useful in a system and method for introducing
 12 new and alternative products that are of the same type as products normally
 13 purchased by the shopper. The smart card records the shopper's purchases
 14 and submits an automatic notification to the shopper when a quantity
 15 threshold is achieved for the pre-selected products. This notification will
 16 encourage the consumer to consider alternative products by providing the
 17 consumer incentives, such as a pricing discount, to purchase an alternative
 18 product.

19 **Claim 1:**

20 A method for using a smart card in a marketing analysis program designed
 21 to introduce new products, the method comprising the steps of:

22 storing product information on the smart card when said products
 23 are purchased by a consumer wherein said information including type,
 24 quantity and dates of the product purchased;

25 identifying for each product a threshold for each of said type,
 quantity and dates of products purchased;

determining an incentive for an alternative product based on said
 threshold; and

automatically notifying said consumer when said threshold is
 reached for a given product identified on the smart card and providing the
 consumer with said incentive, whereby the incentive encourages the
 consumer to consider alternative products.

1 **b. Evidence**

2 Reference A discloses smart card that tracks consumer preferences by
3 recording the type, quantity, and dates of purchase of pre-selected products to
4 determine trends in consumer purchases. The smart card is periodically read by a
5 scanner to determine its contents for market analysis. In return for using the smart
6 card and participating in the marketing program, the user is provided with free
7 product coupons for products that are normally purchased by the shopper.

8 Reference B discloses a traditional consumer incentive program that
9 provides coupons for the purchase of named products based upon the consumer's
10 purchase of those same products to promote customer loyalty.

11 **c. Poor statement of the rejection**

12 Claim 1 is rejected under 35 U.S.C. 103 as being unpatentable over
13 Reference A in view of Reference B. Reference A discloses the
14 conventional use of a smart card to track consumer preferences and provide
15 incentives. However, Reference A does not disclose the automatic
16 notification to consumer providing incentives. Reference B discloses
17 providing incentives to consumers to purchase the desired products. *It*
18 *would have been obvious to combine Reference A's smart card with*
19 *Reference B's incentive to consumers because the combination would*
20 *allow Reference A's smart card to be more efficient.*

21 **d. Analysis**

22 *The motivation, improve efficiency, is too general because it could*
23 *cover almost any alteration contemplated of Reference A and does not*
24 *address why this specific proposed modification would have been obvious.*
25 Additionally, there is nothing in either of references that would suggest
automatically notifying the consumer when reaching a threshold nor is
there anything in either reference that would suggest the notifying step.
Finally, although Reference B teaches a traditional coupon scheme to
promote customer loyalty, there is no suggestion, other than applicant's
disclosure, to employ this scheme to promote the introduction of new and
alternative products. The rejection is improper.

1 **The Office's Attempted Combination of Merriam and Wang**

2 In attempting to combine Merriam and Wang, the Office argues that
3 Merriam discloses all recited features except for a hierarchical tree structure. The
4 Office then relies on Wang and argues that Wang discloses a hierarchical tree
5 structure.

6 Given these two references, the Office argues that their combination would
7 render the subject matter of many of the claims obvious. In support of its
8 argument, the Office argues that the skilled artisan would have readily recognized
9 the desirability and advantage of modifying Merriam by employing the system of
10 Wang in order to more efficiently and precisely determine the current location of a
11 device in a point of space on the earth.

12 Applicant respectfully disagrees with the Office's combination and its
13 stated motivation to combine these references. As such, Applicant respectfully
14 submits that the Office has failed to establish a *prima facie* case of obviousness.

15 Consider, for example, the nature of Merriam's disclosure. Specifically,
16 Merriam teaches a system that utilizes a positioning device to receive positioning
17 signals so that the positioning device can determine its location. Once its location
18 is determined, the positioning device can ascertain whether it is safe to dig at the
19 particular location. The Office argues that it would be obvious to employ Wang's
20 hierarchical system in Merriam's system to efficiently determine the precise
21 location of Merriam's device in a hierarchical tree structure of nodes.

22 Applicant respectfully submits that Merriam's system and method have no
23 need whatsoever for determining the precise location of its positioning device in a
24 hierarchical tree structure that includes countries, states, and cities. Merriam's
25 positioning device determines its current location and whether it is safe to dig at

1 that current location. To do this, the device determines its current location and
2 then sends this information to a central computer that searches a database to
3 determine whether it is safe to dig at that particular location. After determining
4 whether it is safe to dig at the current location, the central computer sends this
5 information back to the device, and the user of the device can act accordingly. It
6 would be pointless as well as a waste of time and resources for Merriam's device
7 to traverse a tree structure of nodes to determine its precise location in a
8 hierarchical tree structure of nodes. For example, Merriam's device has no need to
9 determine that its current location is in Seattle, which is in Washington, which is
10 in the United States. The only thing that the device needs to know is whether there
11 are any objects buried in close proximity to the current location.

12
13 **The Office's Attempted Combination of Fitch and Wang**

14 Similarly, in attempting to combine Fitch and Wang, the Office argues that
15 Fitch discloses all recited features except for a hierarchical tree structure. The
16 Office then relies on Wang and argues that Wang discloses a hierarchical tree
17 structure.

18 Given these two references, the Office argues that their combination would
19 render the subject matter of many of the claims obvious. In support of its
20 argument, the Office argues that the skilled artisan would have readily recognized
21 the desirability and advantage of modifying Fitch by employing the system of
22 Wang in order to more efficiently and precisely determine the current location of a
23 device in a point of space on the earth.

1 Applicant respectfully disagrees with the Office's combination and its
2 stated motivation to combine these references. As such, Applicant respectfully
3 submits that the Office has failed to establish a *prima facie* case of obviousness.

4 Consider, for example, the nature of Fitch's disclosure. Specifically, Fitch
5 teaches a system for "using multiple LFE [*Location Finding Equipment*] inputs
6 to enhance the location information made available to wireless location-based
7 applications" (Col 2., lines 23-26). *Wireless stations* (i.e. wireless telephones) are
8 able to communicate amongst one another over a wireless network. Fitch proposes
9 a way to use multiple LFE's (i.e. GPS) to send location specific information
10 concerning the wireless stations to wireless based applications. An example of a
11 *wireless based application* is location dependent call billing. "In typical location
12 dependent call billing applications, the location of a wireless station is determined,
13 for example, upon placing or receiving a call. This location is then transmitted to a
14 billing system that determines an appropriate billing value based on the location of
15 the wireless station" (Col. 2, lines 32-37). Fitch proposes a system that *uses*
16 *multiple LFE's* to enhance the location information made available to wireless
17 applications.

18 Applicant respectfully submits that Fitch's system and method have no
19 need whatsoever for determining the precise location of a device using a
20 hierarchical tree structure. Fitch relies solely on making sure that an appropriate
21 LFE is used at all times to send the most accurate location information to multiple
22 location applications. It would be pointless as well as a waste of time and
23 resources for Fitch's device to traverse a tree structure of nodes to determine its
24 precise location in a hierarchical tree structure of nodes.

The Claims

Claim 17 recites a computing device comprising:

- a computer-readable medium;
- a location service module embodied on the computer-readable medium; and
- multiple different location providers configured to receive information from one or more different sources of information and process the information to provide location information to the location service module,
- the location service module being configured to process the location information to provide a current device location; and
- *a hierarchical tree structure that resides on the computer-readable medium, the hierarchical tree structure comprising multiple nodes that are each assigned a unique identification, the nodes representing geographical divisions of the Earth, the location service module being configured to traverse at least some of the nodes to provide the current device location.*

In making out the rejection of the claim, the Office argues that Merriam discloses all of the subject matter of the independent claim except for the hierarchical tree structure. For this feature, the Office relies on Wang and argues that its combination with Merriam would render the subject matter obvious. As a motivation for making this combination, the Office argues that the motivation would be to “more efficiently and precisely determine the current location of a device.”

Applicant respectfully disagrees with the Office’s combination and its stated motivation to combine these references. As such, Applicant respectfully submits that the Office has failed to establish a *prima facie* case of obviousness.

Consider, for example, the nature of Merriam’s disclosure as noted above. Specifically, Merriam teaches a system that utilizes a positioning device to receive

1 positioning signals so that the positioning device can determine its location. Once
2 its location is determined, the positioning device can ascertain whether it is safe to
3 dig at the particular location. The Office argues that it would be obvious to
4 employ Wang's hierarchical system in Merriam's system to more efficiently and
5 precisely determine the current location of a device in a point of space on the
6 earth.

7 Applicant respectfully submits that Merriam's device has no need
8 whatsoever for determining its precise location in a hierarchical tree structure that
9 includes countries, states, and cities. Merriam is only concerned with whether it is
10 safe to dig at its current location. Precise location, i.e. country, state and city, is of
11 no consequence to Merriam's device. Accordingly, the Office's combination of
12 these references does not logically make sense. In addition, the Office's stated
13 motivation - for efficiency—is so broad as to support any modification of
14 Merriam and is lacking in the type of particularity that is needed to make out a
15 *prima facie* case of obviousness. As such, the Office has failed to establish a
16 *prima facie* case of obviousness and this claim is allowable.

17 Additionally, the Office makes a similar argument regarding the
18 combination with Fitch. The Office argues that Fitch discloses all recited features
19 except for a hierarchical tree structure. The Office then relies on Wang and argues
20 that Wang discloses a hierarchical tree structure.

21 Given these two references, the Office again argues that their combination
22 would render the subject matter obvious. In support of its argument, the Office
23 argues that the skilled artisan would have readily recognized the desirability and
24 advantage of modifying Fitch by employing the system of Wang in order to more
25

1 efficiently and precisely determine the current location of a device in a point of
2 space on the earth.

3 Applicant respectfully disagrees with the Office's combination and its
4 stated motivation to combine these references. As such, Applicant respectfully
5 submits that the Office has failed to establish a *prima facie* case of obviousness.

6 Applicant respectfully submits that Fitch's system and method have no
7 need whatsoever for determining the precise location of a device using a
8 hierarchical tree structure. Fitch relies solely on making sure that an appropriate
9 LFE is used at all times to send the most accurate location information to multiple
10 location applications. It would be pointless as well as a waste of time and
11 resources for Fitch to traverse a tree structure of nodes to determine its precise
12 location in a hierarchical tree structure of nodes. In addition, the Office's stated
13 motivation – for efficiency—is so broad as to support any modification of Fitch
14 and is lacking in the type of particularity that is needed to make out a *prima facie*
15 case of obviousness.

16 Accordingly, the Office has failed to establish a *prima facie* case of
17 obviousness, and the claim is allowable.

18 **Claims 18-31 and 33** depend from claim 17 and are allowable as
19 depending from an allowable base claim. These claims are also allowable for their
20 own recited features which, in combination with those recited in claim 17, are
21 neither disclosed nor suggested in the references cited and applied by the Office.

22 **Claim 34** recites a method of determining the location of a computing
23 device comprising:
24
25

- providing multiple location providers that are configured to provide location information that pertains to a current location of the computing device;
- receiving location information from the multiple location providers using a common interface;
- using the information that is received from the multiple location providers to ascertain a current device location *by using a hierarchical tree structure comprising multiple nodes that are each assigned a unique identification, the nodes representing geographical divisions of the Earth, said act of using comprising traversing at least some of the nodes to provide the current device location.*

With regard to the subject matter that has been incorporated into this claim, the Office has failed to establish a *prima facie* case of obviousness, as noted above. Accordingly, this claim is allowable.

Claims 35-40 depend from claim 34 and are allowable as depending from an allowable base claim. These claims are also allowable for their own recited features which, in combination with those recited in claim 34, are neither disclosed nor suggested in the references cited and applied by the Office.

Claim 41 recites one or more computer-readable media having computer-readable instructions thereon which, when executed by a hand-held mobile computing device, cause the hand-held mobile computing device to:

- provide multiple different location providers that are configured to provide location information that pertains to a current location of the computing device;
- receive location information from the multiple different location providers using a common interface; and

- use the information that is received from the multiple location providers to ascertain a current device location *by traversing a hierarchical tree structure comprising multiple nodes that represent physical or logical entities in order to ascertain the current device location.*

In making out the rejection of claim 41, the Office argues that its subject matter would be obvious over the combination of Fitch and Wang, and over the combination of Merriam and Wang. As noted above, the Office has failed to establish a *prima facie* case of obviousness with regard to the combination of these references. As such, this claim is allowable.

Claim 43 recites a method of determining the location of a mobile computing device comprising:

- providing multiple different location providers that are configured to provide location information that pertains to a current location of the computing device;
- monitoring one or more of the location providers;
- assigning a confidence parameter to location information that is provided by one or more providers, the confidence parameter providing a measure of a provider's confidence in its location information;
- sending the location information and the confidence parameter to a location service module on the mobile computing device, the location service module being configured to use the location information and the confidence parameter to ascertain a current device location;
- *wherein said location information is configured to be used by the location service module in conjunction with a hierarchical tree structure that resides on a computer-readable medium on the mobile computing device, to ascertain the current device location, the hierarchical tree structure comprising multiple nodes that are each assigned a unique identification, the nodes representing geographical divisions of the Earth, the location service module being configured to traverse at least some of the nodes to provide the current device location.*

1 In making out the rejection of claim 43, the Office argues that its subject
2 matter would be obvious over the combination of Fitch and Wang. As noted
3 above, the Office has failed to establish a *prima facie* case of obviousness with
4 regard to the combination of these two references. As such, this claim is
5 allowable.

6 **Claims 44-51** depend from claim 43 and are allowable as depending from
7 an allowable base claim. These claims are also allowable for their own recited
8 features which, in combination with those recited in claim 43, are neither disclosed
9 nor suggested in the references cited and applied by the Office.

10 **Claim 52** recites a method of determining the location of a mobile
11 computing device comprising:

- 12 • providing multiple different location providers that are configured to
13 provide location information that pertains to a current location of the
14 computing device;
- 15 • monitoring one or more of the location providers;
- 16 • assigning an accuracy parameter to location information that is
17 provided by one or more providers, the accuracy parameter
18 providing a measure of the accuracy of a provider's location
19 information;
- 20 • sending the location information and accuracy parameter to a
21 location service module on the mobile computing device, the
22 location service module being configured to use the location
23 information and the accuracy parameter to ascertain a current device
24 location;
- 25 • *wherein said location information is configured to be used by the
location service module in conjunction with a hierarchical tree
structure that resides on a computer-readable medium on the
mobile computing device, to ascertain the current device location,
the hierarchical tree structure comprising multiple nodes that are
each assigned a unique identification, the nodes representing
geographical divisions of the Earth, the location service module
being configured to traverse at least some of the nodes to provide
the current device location.*

1 In making out the rejection of claim 52, the Office argues that its subject
2 matter would be obvious over the combination of Fitch and Wang. As noted
3 above, the Office has failed to establish a *prima facie* case of obviousness with
4 regard to the combination of these two references. As such, this claim is
5 allowable.

6 Claims 53-59 depend from claim 52 and are allowable as depending from
7 an allowable base claim. These claims are also allowable for their own recited
8 features which, in combination with those recited in claim 52, are neither disclosed
9 nor suggested in the references cited and applied by the Office.

10
11 **Conclusion**

12 All of the claims are in condition for allowance. Accordingly, Applicant
13 respectfully requests a Notice of Allowability be issued forthwith. If the Office's
14 next anticipated action is to be anything other than issuance of a Notice of
15 Allowability, Applicant respectfully requests a telephone call for the purpose of
16 scheduling an interview.

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18 Respectfully Submitted,

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